

CLAIMS

1. An internal combustion engine including one or more pistons, each of  
5 which is mounted to reciprocate in a respective cylinder and is pivotally  
connected to a connecting rod which is connected to a respective crank on a  
crankshaft, the connecting rod being pivotally connected to one end of an  
elongate link member which is pivotably connected to the associated crank at a  
point intermediate its ends and whose other end constitutes a rod which is  
10 restrained by a mounting such that it may pivot about a pivotal axis parallel to  
the axis of the crankshaft, the mounting including a first movable mounting  
member and a second movable mounting member, the first movable mounting  
member being connected to the rod by a connection which permits only relative  
sliding movement in the direction of the length of the rod and the first movable  
15 mounting member being connected to the second movable mounting member to  
be pivotable with respect thereto about the said pivotal axis, a single actuating  
means being provided which cooperates with the second movable mounting  
member and is arranged to move it, characterised in that the second movable  
mounting member is an elongate lever which is connected to a fixed structure to  
20 pivot with respect thereto about an axis substantially parallel to the axis of the  
crankshaft.

2. An engine as claimed in Claim 1 in which the elongate lever is rotatably  
carried by a shaft mounted in fixed mountings and the actuator acts on the lever  
25 to rotate it with respect to the shaft.

3. An engine as claimed in Claim 1 in which the elongate lever is a non-

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rotatably connected to an actuator shaft which is rotatably mounted in fixed mountings, and the actuator acts on the shaft to rotate it.

4. An engine as claimed in Claim 3 including an actuator lever which is non-rotatably connected to the actuator shaft and the actuator acts on the actuator lever.

5. An engine as claimed in any one of the preceding claims in which the elongate lever is bifurcated and comprises two arms between which the first movable mounting member is received and to which the first movable mounting member is pivotally connected.

6. An engine as claimed in any one of the preceding claims in which the actuator is of positive type and is arranged positively to move the second movable mounting member.

7. An engine as claimed in any one of the preceding claims in which the actuator is of passive type and constitutes a selectively releasable lock which may be released to permit the second movable mounting member to be moved under the action of the forces exerted on it by the rod.

8. An engine as claimed in Claim 7 in which the actuator is constructed to operate in the manner of a ratchet and is selectively switchable to prevent movement of the second movable mounting member or to permit movement in a selected one of two directions whilst preventing movement in the opposite direction.

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9. An engine as claimed in Claim 8 in which the actuator includes a hydraulic cylinder accommodating a piston connected to the second movable mounting member, the piston dividing the cylinder into two chambers filled with hydraulic fluid, the two chambers communicating via two conduits, each  
5 of which includes a non-return valve and a control valve which is selectively operable to permit the piston to be moved by the forces acting on it in a predetermined direction.